Balancing Transformation - Storage Stakeholder Group

12 May 2023

ESO

Agenda

11:30 Introductions and recap – Richard/Natasha

- *Richard to cover recap from previous meetings for new participants; group purpose; what we have achieved so far & next steps*

11:40 Battery redeclaration rules; moving old to new systems - Mark

- *Redeclaring parameters after instructions have been generated*

11:50 Battery NDZ, MZT and MNZT = 0? – Natasha

- *Confirm batteries should be considered = 0*

12:00 Proposed changes to the Grid Code discussion - Bernie

- *Roundtable discussion to work through details on how new parameters may work to allow us to understand State of Charge in the new system. (Removing the need for the '15 minute rule')*
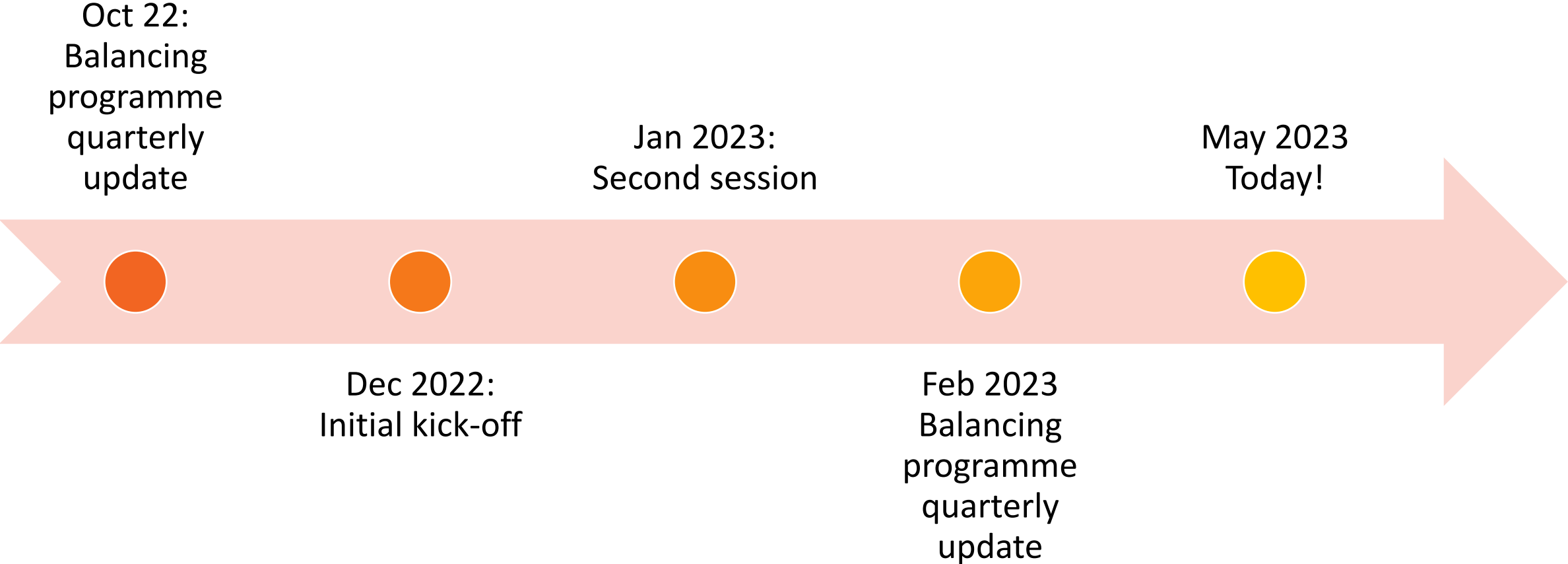
12:55 AOB

Close - Natasha

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Storage Stakeholder Group
The story so far…

Richard/Natasha

Storage Stakeholder Group timeline

Oct 22:
Balancing programme quarterly update

Dec 2022:
Initial kick-off

Jan 2023:
Second session

Feb 2023
Balancing programme quarterly update

May 2023
Today!

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Progress and outcomes so far

Shorter term

- Clarified assumptions that have unblocked work for OBP (new system set to replace BM)

    - Programmatically calculating MWh based on MEL/MIL. Currently a manual workaround in current systems

    - Clarified unwritten rules and practices

    - The shorter term clarification has also helped us build for the future in OBP

- Started to work together on some iterative changes for market data specifically to give new systems better visibility

    - Technical codes teams have been engaged with us since the group started

    - We want to work together, both the technical codes team and the Storage Stakeholder group to get the right solution for everyone
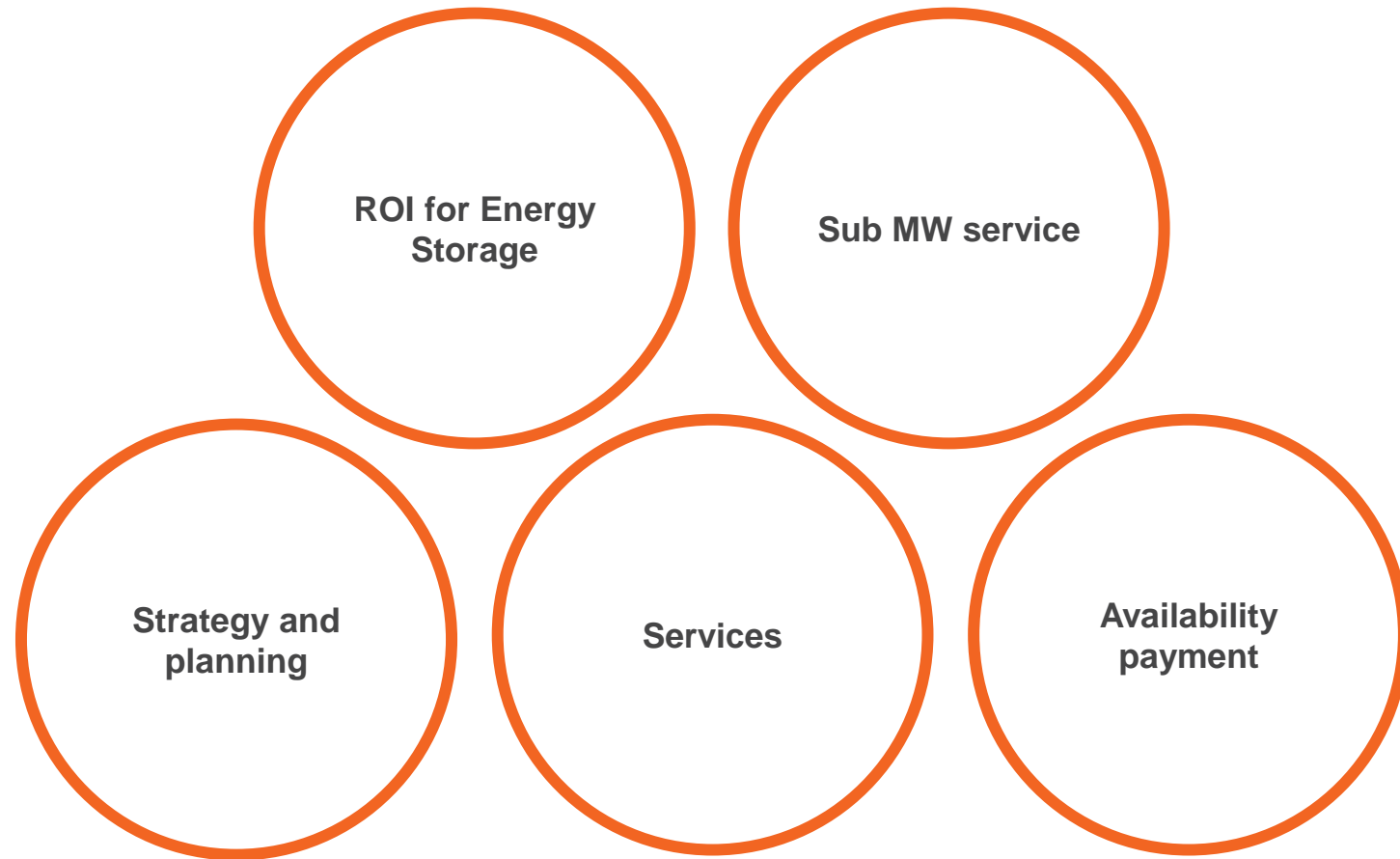
Progress and outcomes so far

Longer term

- First session had an open floor for conversations about challenges and pain points directly from stakeholders

- Grouped these into themes

- Deeper discussions around each themes challenges and pain points

- Future session to involve other parts of the ESO on some of these challenges

- Continue these meetings to continually work towards improvements for everyone

There is enough conversation to keep us going for a while!

ROI for Energy Storage

Sub MW service

Strategy and planning

Services

Availability payment

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Behind the scenes activity

- Previously clarified functionality has been built into OBP (new systems set to replace BM)

- Discussions with internal stakeholders regarding new parameters for storage

- "Recruitment" of ESO colleagues to join an in-person event to discuss some of the wider topics (markets, control room, data insights etc)

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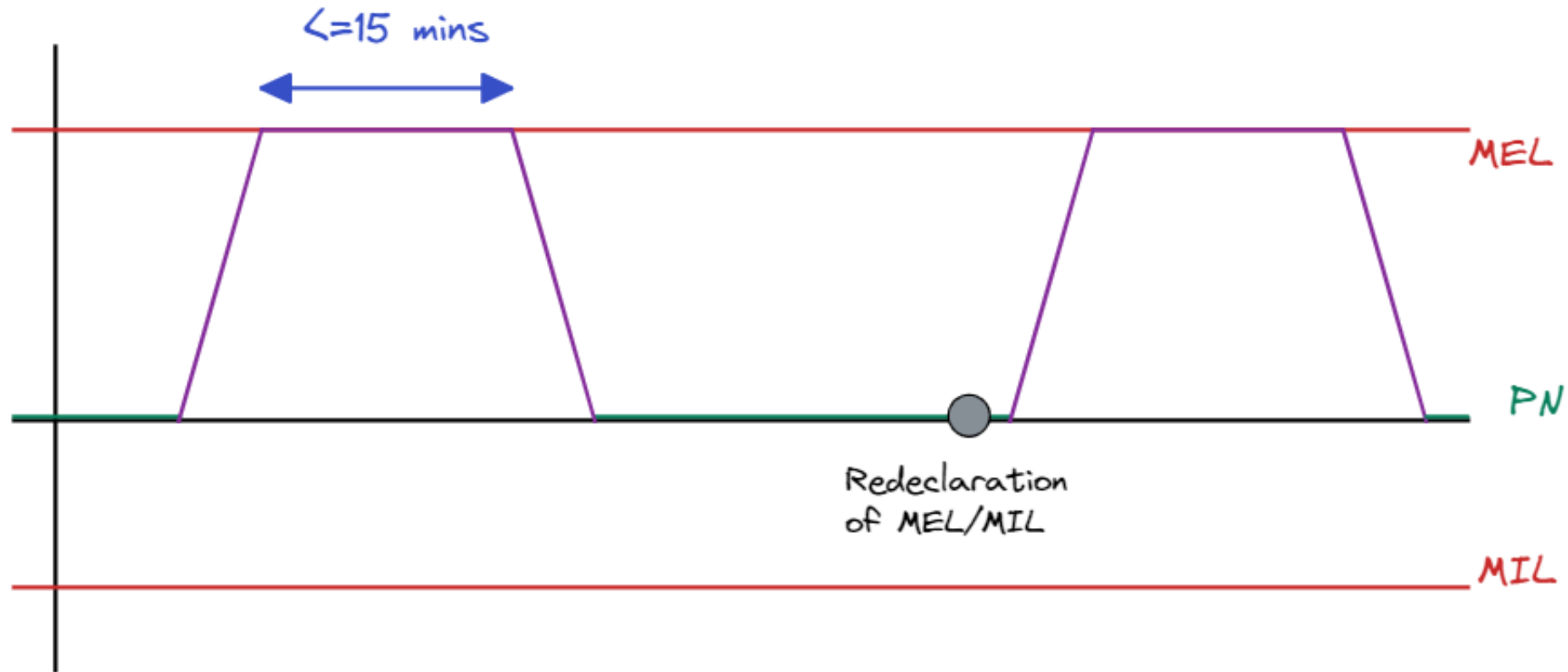Out with the old and in with the new!

# Battery redeclaration rules; moving old to new systems

Mark

Current manual process:
- BOA sent for upto 15 mins.
- Unit redeclares MEL/MIL values
- Further instruction can be sent once the control room receives the redeclared MEL/MIL

Automation of current process (for Release 1.0):
1. BOA.1 sent based on available capacity (via MEL/MIL declarations)
2. Unit will not be included by the optimiser until capacity is confirmed (via updated MEL/MIL redeclaration)
3. Unit redeclares MEL/MIL values from current time - as soon as they have recalculated available capacity based on received BOA
4. Unit is re-included in the optimiser
5. BOA.2 sent to the unit
6. Unit redeclares MEL/MIL from current time and unit is included in the optimiser again
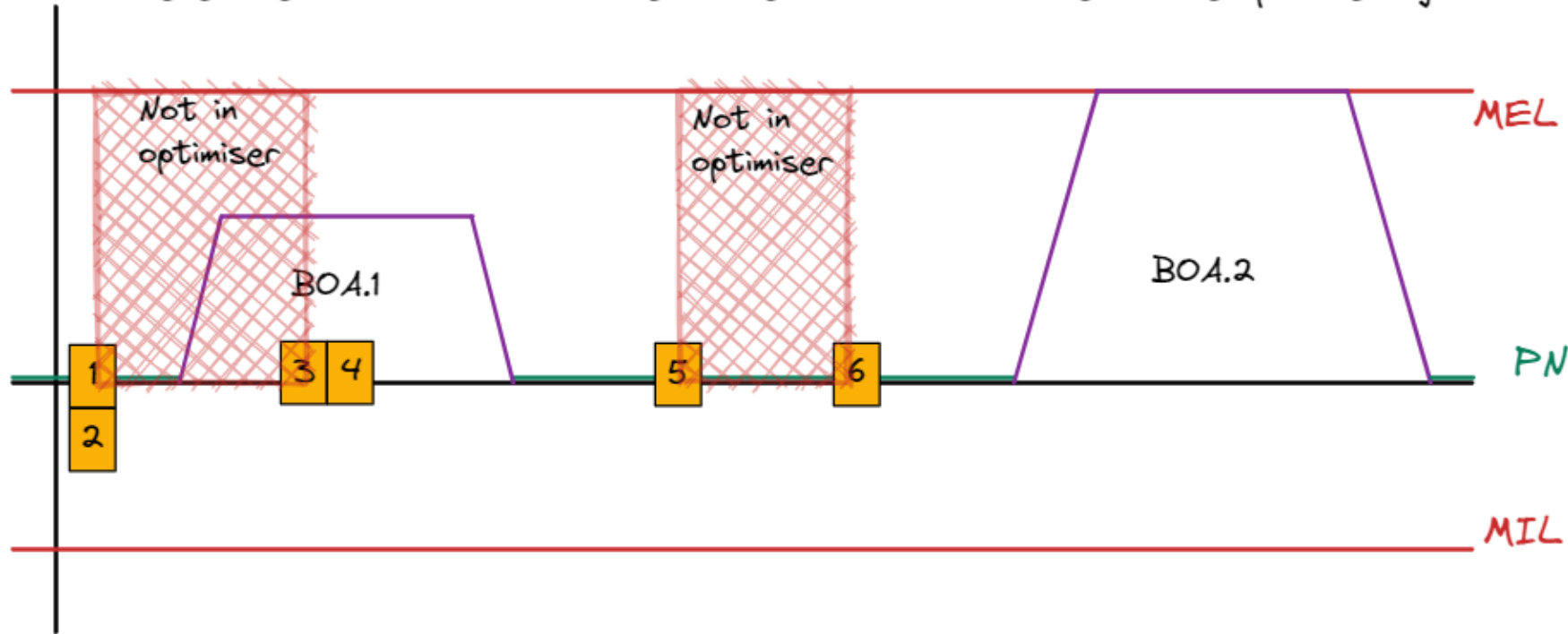
Note: if the start time of the MEL/MIL is more than 90 minutes in the future, the control room will manually re-include the unit into the optimiser in the same way that they currently look to dispatch battery units.
It is therefore important to send through the most accurate up to date data at the earliest opportunity to allow our tools to make informed decisions with all available units included.

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Battery NDZ, MZT and MNZT = 0?

Natasha

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Your input needed

- Plan is for all batteries to be considered MZT = 0 for OBP Release 1.0.
- Need confirmation **are NDZ, MZT and MNZT = 0 for all batteries**?
- Is there a valid situation that some batteries could have non-zero MZTs?

Proposed Changes to the Grid Code

Max Delivery Volumes
Max Delivery Periods
## Time Varying Data
Optimising over future timescales

Bernie Dolan

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Maximum Delivery Volume (Export/Import) – MDVE & MDVI

One proposal is the creation of two new parameters called MDVE and MDVI

- Does the group agree that MDVE/MDVI are useful parameters that can be supplied by a unit?
- The proposal is that MDVE & MDVI have units of energy (MWh)
- Do you think these values should be measured relative to 0MW or the current output of the unit? (see diagrams below)
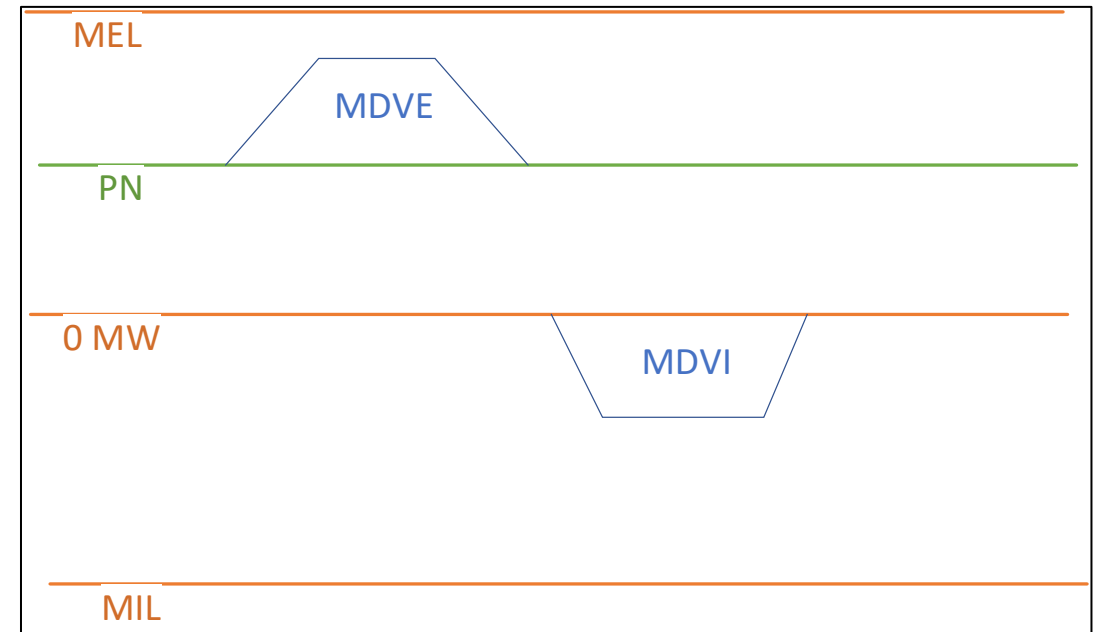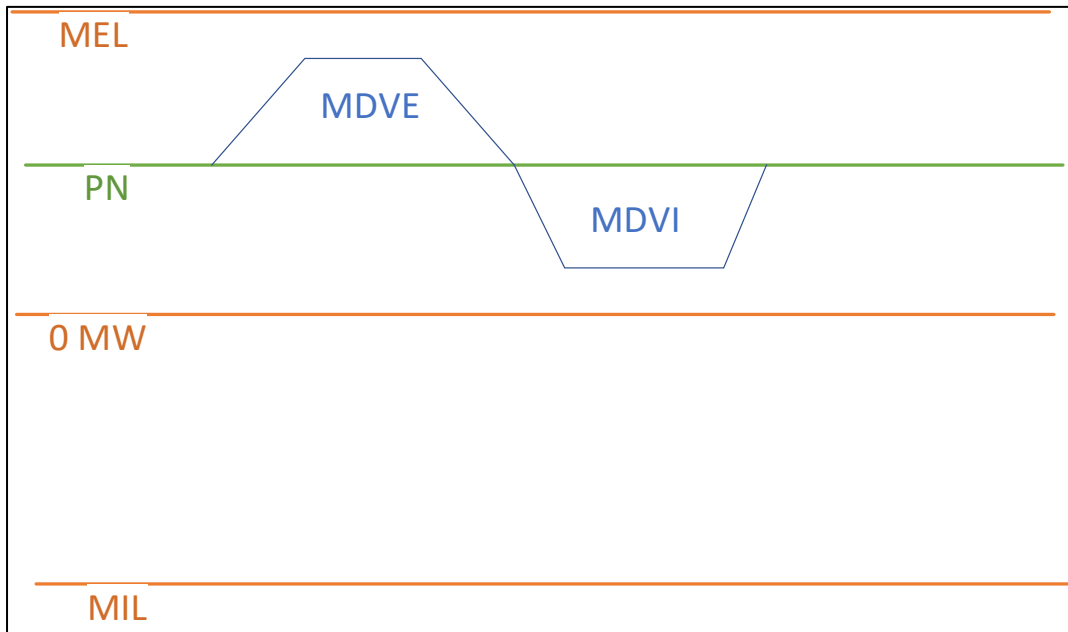
Other considerations

Maximum Delivery Period Export (MDPE) and Maximum Delivery Period Import (MDPI)
- The current NETA "Data Validation, Consistency and Defaulting Rules" defines a Maximum Delivery Volume (MDV) and a Maximum Delivery Period (MDP)
- Do we need an equivalent MDPE and MDPI?
- Given that MDVE and MDVI are units of energy are the concepts MDPE/MDPI redundant?

Time Varying Data
- Should any of the parameters MDVE/MDVI/MDPE/MDPI be time varying?
- Is it useful to define them in this way – for example, without knowing what BOAs a unit may receive can volumes be determined in the future?

Optimising in future timescales (outside the BM Window)
- Some comments on the mural board have pointed out that optimising beyond the BM window may be advantageous
- Is this something the group believes is useful?
- If this was useful, what extra data would the ESO need to enable this and what could storage units provide?

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AOB

Natasha